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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/963,395 | 09/27/2001 | Hirofumi Nitta | 000400-873 | 9045 |
| 7590 | 08/18/2004 | | EXAMINER | |
| Platon N. Mandros, Esquire BURNS, DOANE, SWECKER & MATHIS, L.L.P. P.O. Box 1404 Alexandria, VA 22313-1404 | | | NGUYEN, XUAN LAN T | |
| | | ART UNIT | PAPER NUMBER | 3683 |

DATE MAILED: 08/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/963,395 | NITTA ET AL. | |
| | Examiner | Art Unit | |
| | Lan Nguyen | 3683 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
 THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 May 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 15-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 15-24 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 27 September 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "HS" on pages 12 and 17; and "AO" on page 16. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to because in figure 4, box 104, "Vecle" should be -- Vehicle--. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

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changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "height sensor" as claimed in claims 19 and 24 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of

the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 15-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takata et al. (US 4,850,655) in view of Hachtel (US 6,402,265).

Re: claim 15, Takata et al. disclose a hydraulic brake system including a hydraulic pressure generating device K1 for pressurizing brake fluid supplied from a reservoir 12 to apply a brake pressure to a wheel cylinder in response to operation of a brake operating member 3, an auxiliary hydraulic pressure source 11,13 having an accumulator 13 and a hydraulic pump 11, the hydraulic pump pressurizing the brake fluid supplied from the reservoir 12 for generating a power hydraulic pressure, the hydraulic pressure generating device including a master cylinder and a hydraulic booster assisting operation of the master cylinder by using the power hydraulic pressure generated by the auxiliary hydraulic pressure source. Hachtel discloses an output hydraulic pressure detecting means for continuously detecting an output hydraulic pressure 180 of an accumulator 185 of a auxiliary hydraulic pressure source, vehicle

condition detecting means 118 and inherent vehicle speed sensor as described in column 4, lines 35-40, for continuously detecting an operating condition of the vehicle, driving condition setting means 300 for setting a driving condition of the hydraulic pump based on the operating condition of the vehicle detected by the vehicle condition setting means and a driving control means as described in column 4 lines 40-55, for controlling the electric motor to drive the hydraulic pump based on the driving condition of the hydraulic pump set by the driving condition setting means and the output hydraulic pressure of the accumulator of the auxiliary hydraulic pressure source as indicated by sensor 180, the driving control means controlling a driving duty of the electric motor to set different driving duties of the electric motor which drive the hydraulic pump based on the driving condition of the hydraulic pump set by the driving condition setting means. It would have been obvious to one of ordinary skill in the art to which the invention pertains at the time the invention was made to have provided the feedback control of Hachtel in a device according to Takata et al. in order to accommodate brake fade in a brake system to ensure that the vehicle would be properly decelerated.

Re claim 16, Hachtel shows in column 4 line 39, that the speed of the vehicle is monitored in response to a pedal actuation. It is inherent that the speed sensor would be able to detect a speed of zero or the condition of the vehicle being stopped.

Re claims 17 and 20, Hachtel further shows the vehicle condition detection means to include a pedal sensor 118 and the vehicle speed sensor as discussed in claim 16. Hachtel further discusses "brake fade" condition in column 5, lines 1-5, and

controlling the pump and monitoring the accumulator pressure in order to assist the brake system in a “brake fade” condition.

Re claims 18 and 19, Hachtel shows a pressure sensor 180 for sensing the pressure in the accumulator; and as discussed above, Hachtel’s system includes at least a pedal sensor 118.

Re: claims 21 and 22, the discussion of the rejection of claims 15, 16 and 17 above meets the claimed limitations of claims 21 and 22.

Re: claims 23 and 24, Hachtel shows a pressure sensor 180 for sensing the pressure in the accumulator; and as discussed above, Hachtel’s system includes at least a pedal sensor 118.

Response to Arguments

6. Applicant's arguments filed 5/14/04 have been fully considered but they are not persuasive. Applicant argues that Hachtel does not disclose a driving control means for setting different driving duties of the electric motor. Applicant further states that Hachtel's system only turns the electric motor for the pump on and off. Applicant's argument is more specific than the claimed language. The pump of Hachtel is driven on or off, as having "Different driving duties" because being driven on is different than being driven off. Applicant also argues that Hachtel's electric motor is being driven based on the difference between set point pressure and the accumulator pressure while Applicant's electric motor is being driven based on the operating condition of the vehicle. Hachtel clearly states from column 1, line 65 to column 2, line 11, "**a method is**

provided for compensating for the accumulator pressure in an electrohydraulic braking system, in which a wheel setpoint pressure is compared in a simple manner to an active accumulator pressure, and in response to falling below (or failing to meet) a predefinable (or preset) minimum difference, the accumulator pressure is raised accordingly. The variable representing the wheel setpoint is expediently determined from a brake pedal travel, and/or a master cylinder pressure, and/or from the vehicle speed. These parameters are able to be determined relatively simply and make it possible for one to define an optimal wheel setpoint pressure with adequate precision." It is believed that "brake pedal travel, and/or a master cylinder pressure, and/or from the vehicle speed" are parameters of the operating condition of the vehicle. The rejection is still deemed proper and is repeated above.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Nguyen whose telephone number is 703-308-8347. The examiner can normally be reached on M-F, 8 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lan Nguyen 8/16/04
Lan Nguyen
Patent Examiner
A. U. 3683